

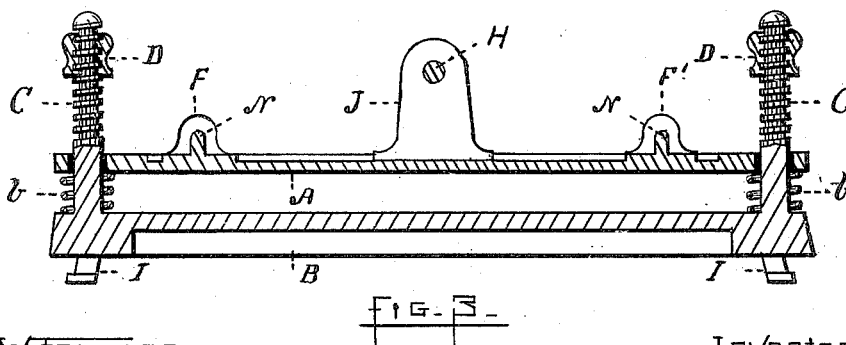
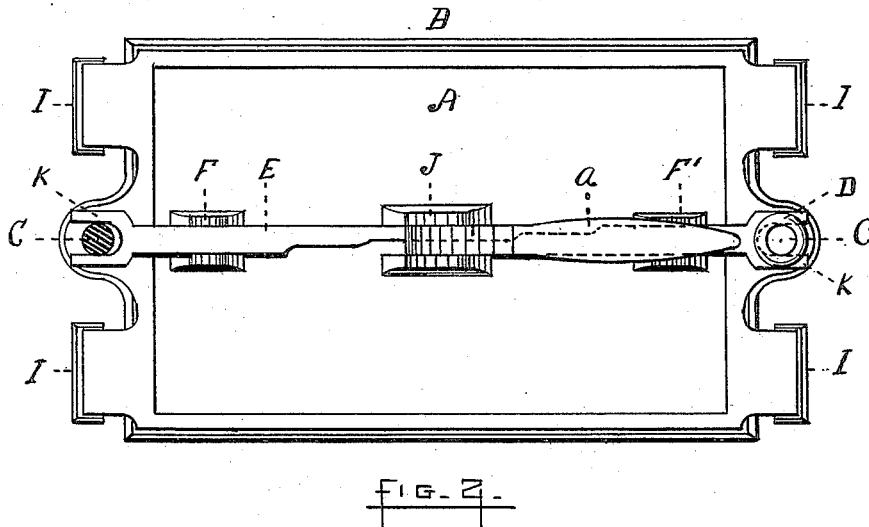
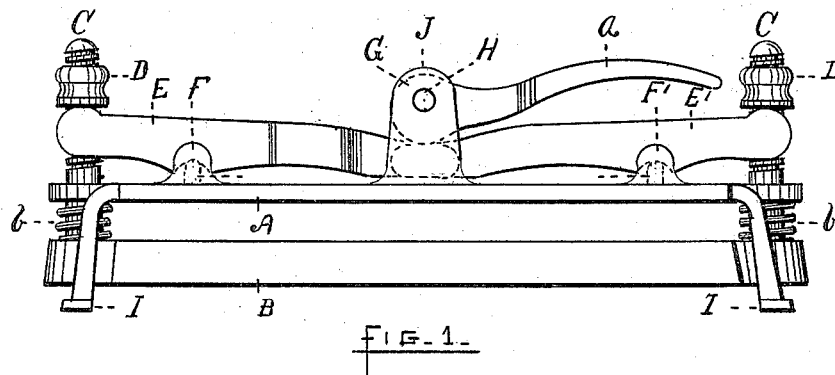
(No Model.)

2 Sheets—Sheet 1.

R. E. KIDDER.
COPYING PRESS.

No. 307,662.

Patented Nov. 4, 1884.



Witnesses.

R. B. Fowler
H. M. Fowler

Inventor.

R. E. Kidder

(No Model.)

2 Sheets—Sheet 2.

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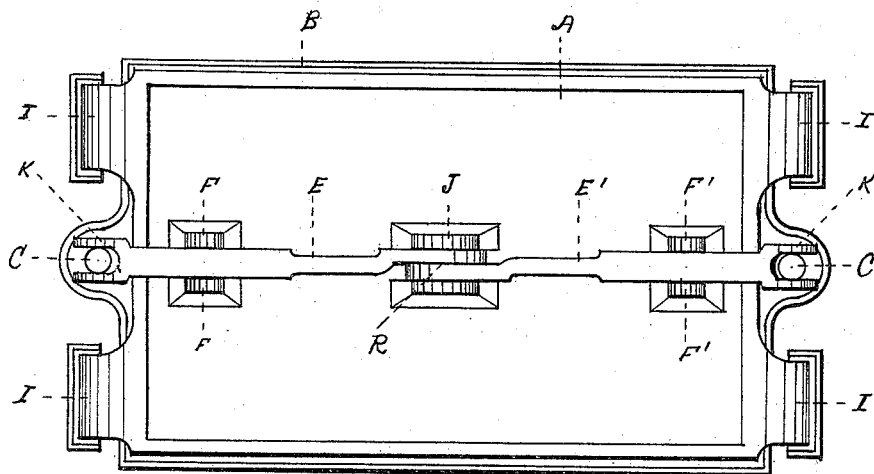


FIG. 4

WITNESSES-

H. M. Fowler.
B. M. McBrohan

INVENTOR-

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By Rufus Bennett Fowler
Atty.

UNITED STATES PATENT OFFICE.

RICHARD E. KIDDER, OF WORCESTER, MASSACHUSETTS.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 307,662, dated November 4, 1884.

Application filed October 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, RICHARD E. KIDDER, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Copying-Presses, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents the front elevation of a copying-press embodying my invention; Fig. 2, a top view of the same, and Fig. 3 a front elevation with the operating cam and levers removed and a portion shown in section. Fig. 4 represents a top view with the cam and adjusting-nuts removed.

Similar letters refer to similar parts in the several drawings.

A is the bed-plate, supported by the legs I, against the under side of which the article to be pressed is brought by the vertically-moving platen B.

To the plate B are firmly attached the guiding-posts C C, passing through apertures in the plate A, each having a screw-thread and carrying the adjusting-nuts D D.

Vibrating on the fulcra N N, and held between the retaining-lugs F F', are the levers E and E', with their outer ends bearing against the under sides of the adjusting-nuts, and having their opposite ends extending past each other a short distance between the lugs J in the center of the plate A, as shown at R, Fig. 4. The lugs J hold the pivotal pin H, about which the cam G turns, actuated by the hand-lever a. When the lever a and cam G stand in the position shown in the drawings, the inner ends of the levers E E' are forced down, thereby raising the platen B toward the bed-plate A by means of the nuts D D and posts C C. When the handle a is turned to a similar position at the left of the pivot H, the weight of the platen B will cause it to fall, raising the inner ends of the levers E E' against the cam G. If the arms of the levers are of equal length, the amplitude of the motion of the platen B will equal the eccentricity of the cam. I prefer to make the outer arms of the levers about one-half the length of the inner arms, thereby increasing the power of the cam, and correspondingly diminishing the motion of the platen B, which only need be sufficient to allow the ar-

ticle to be pressed to be removed. The distance between A and B may be varied to suit copying-books of different sizes by raising or lowering the adjusting-nuts on the screw-threaded guiding-posts C C.

Between the plates A and B, I place the spiral springs b b, which allow the legs I to be removed and the plate B to be supported, the plate A then becoming the movable platen, raised by the springs b b and thrown down by the action of the cam G and levers E E', the operation of the several parts being substantially the same as when A is stationary and B movable.

I am aware that copying-presses have heretofore been in use in which springs have been employed to separate the plates A and B; also that cams have been used for the purpose of bringing the plates together. These features were shown in the press which was illustrated in Letters Patent granted to me March 20, 1877, No. 188,469.

Instead of the adjusting-nuts D D, the outer ends of the levers E E' may be pivoted to the posts C C; or the nuts may be rigidly attached to the posts, and instead of the cam G other suitable means may be used for the purpose of depressing the levers E E'.

What I claim as my present invention, and desire to secure by Letters Patent, is—

1. In a copying-press, the combination, with the two pressure-plates B and A, with guide-posts attached to the lower of said plates, of the levers E and E', fulcrumed on the upper of said plates, with their outer ends connected with the posts C C, and means, substantially as described, for depressing the inner ends, as and for the purpose set forth.

2. In a copying-press, the combination, with the pressure-plates B and A, posts C C, having screw-threads, levers E and E', and means, substantially as described, for actuating the same, of the adjusting-nuts D D, as and for the purpose set forth.

3. In a copying-press, the combination of plates B and A, posts C C, adjusting-nuts D D, levers E E', actuating-cam G, and springs b b, as and for the purpose set forth.

R. E. KIDDER.

Witnesses:

R. B. FOWLER,
GEO. E. SMITH.